Abstract

Title: Selected parameters of gait and foot in consideration of the individual's body height

Objectives: This thesis deals with a dependence of the selected gait and foot characteristics on a person's body height. These parameters are compared between a group of men and a group of women. In addition, a validity of selected formulas used for a determination of body height is evaluated.

Methods: Mutual relation among the gait and foot characteristics and the individual's body height is observed. The thesis is a descriptive – association research, the comparative method is chosen in the practical part of the thesis. For an objectification of the research, the Plantograph and the 3D kinematic gait analysis performed by Qualysis system was used.

Results: It was found out that the selected formulas used for a determination of body height are valid. The best results are brought by the formulas which count with a length of a bare foot, the length of a step and a double-step. On the contrary, the worse results are achieved by using the formulas which count with the dimension of shoe print. A tight dependence of the foot length and the length of the step / double-step on the body height was proven. A minimum dependence of the foot width on the body height was proven. Nevertheless the foot width is verifiably dependent on a gender.

Key words: body height, bipedal gait, plantography, kinematic analysis